CHAPTER 2: Health Inc methodology and the SPEC-by-step tool

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Introduction

Redress of health inequities is a necessary condition for health systems to be people-centred and effective. Numerous interventions in health financing and social health protection aim at reducing health inequities; yet inequities persist, driven more often than not by social exclusion (Popay et al., 2008). Practical tools for assessing health inequities are few, and for assessing social exclusion in health, virtually non-existent. In this chapter, we describe how the Health Inc research consortium developed a generic tool to structure the assessment of social exclusion from social health protection initiatives and how the iterative application of this SPEC-by-step to social health protection schemes gradually evolved into a search for the generative mechanisms of social exclusion.

In 2008, the Commission on Social Determinants of Health (CSDH) made a case for “health equity intervention research” (CSDH, 2008). In 2009, the sixty-second World Health Assembly (WHA) ratified the CSDH’s recommendations and urged in concrete terms “to generate new, or making use of existing methods and evidence (…) in order to address the social determinants and social gradients of health and health inequities”. One of the ways forward highlighted by the WHA was the use of disaggregated data to detect health inequities and to measure the impact of policies on health equity (WHA, 2009). The 2011 World Conference on Social Determinants of Health (WCSDH) reiterated the CSDH’s recommendations and made a plea for “research on the relationships between social determinants and health equity outcomes with a particular focus on evaluation of effectiveness of interventions” (WCSDH, 2011). Known as the Rio political declaration on social determinants of health, the conference’s statement was endorsed by the sixty-fifth World Health Assembly (WHA, 2012) and reconfirmed by the sixty-sixth World Health Assembly (WHA, 2013). A couple of months later, the WHO released its ‘Handbook on health inequality monitoring’ (WHO, 2013).
As pointed out a decade ago by Graham (2004), it is important to make a distinction between the social determinants of health and the social determinants of health inequalities, as the latter often persist even if the former are remedied: “(u)sing one model to explain both health and health inequalities can blur the distinction between the social factors that influence health and the social processes that determine their unequal distribution”. The CSDH’s Social Exclusion Knowledge Network (SEKN) was aware of this drawback and advocated using the concept of social exclusion as a particular and unique framework for understanding the social determinants of persisting health inequities (Popay et al., 2008). The CSDH itself was less cautious when using the indistinct conjunction “social determinants of health and health inequities” (CSDH, 2008) when grouping both determinants in one conceptual framework (based on Solar and Irwin, 2007). Accordingly, the commission’s advocacy for generation of knowledge and monitoring relied on disaggregation of health data more than on exploration of inequitable processes per se. WHO’s recent guidelines on ‘health inequality monitoring’ are predominantly based on health indicators topped up with half a dozen positional (not hierarchical, not contextual) determinants called ‘equity stratifiers’ under the acronym PROGRESS. The CSDH’s Measurement and Evidence Knowledge Network (MEKN), however, had argued for methodological diversity, and for adding process evaluation to widen the evidence base on the determinants of health inequities. Added to this, the MEKN saw a need “to provide answers not only about what interventions work to address SDH, but also how they work and in what context” (Kelly et al., 2007). The CSDH’s Social Exclusion Knowledge Network (SEKN) had made a case for “focusing (…) on processes driving inequality, power relationships, and agency (exclusion by whom?), and on the multi-dimensionality and the inter-linkages between different forms of deprivation (exclusion from what?)”. This, according to the SEKN, would be no easy job in the absence of “a single validated measure of social exclusion”, of which the existence would be problematic anyway. The impasse to overcome was one of quarrelling over definitions of social exclusion, limited applicability of welfare-state specific indicators in a global context, mismatch between survey indicators designed for other purposes and the measurement of social exclusion, and failure of quantitative approaches to provide insight into the experience of suffering exclusion (Mathieson et al. 2008).

As mentioned in the introductory chapter, the Health Inc collaborative research project has been exploring the interface between social exclusion and social health protection. A chain of arguments sustained the choice for social health protection (SHP) as our field of study: the CSDH recommended social protection as one among important policies to bring about health for all (CSDH, 2008), and the United Nations Economic and Social Council followed up with a call for national social protection floors (UNESC, 2009) – an initiative endorsed by the United Nations General Assembly (UNGA, 2009), backed by the International Labour Organization and receiving increasing global support (UNPSDH, 2013). Within this initiative, social health protection – its coverage defined as effective access to affordable quality health care and financial protection in case of illness (ILO, 2008) – is an essential feature (ILC, 2012) in line with the overarching goal of universal health coverage (WHO, 2010).

The 2010 World Health Report concluded that improved health financing is a necessary means to the end of universal coverage, but that more than improved efficiency is needed to achieve equitable coverage (WHO, 2010). Health Inc goes a step further and puts forward the hypothesis that social exclusion (see chapter 1) is an important cause of the limited success of recent health-financing reforms in terms of social health protection (SHP). Based on this hypothesis, the project explores the interface between social exclusion and social health protection within three large-scale health-financing schemes in four states/countries: Rasthrya Swasthya Bima Yojana (RSBY, ‘National Health Insurance Programme’ for below-poverty-line households) in the states of Maharashtra and Karnataka in India, the plan Sésame (free health care for the elderly) in Senegal, and the National Health Insurance Scheme (NHIS) in Ghana.
Development of a generic tool

To start with, the Health Inc project adopted the SEKN’s definition of social exclusion as a range of “dynamic, multidimensional processes driven by unequal power relationships interacting across four main dimensions – economic, political, social and cultural – and at different levels including individual, household, group, community, country and global levels” (Popay, 2008). We reordered the four dimensions into the acronym SPEC (Social, Political, Economic and Cultural), grafting a SPEC lens onto a step-by-step deconstruction of any health-financing scheme under study: the SPEC-by-step tool. Our stepwise deconstruction – following the flow of people through the scheme – is essentially people-centred, not resource-centred. Thus, it is deliberately distinct from the mainstream collecting-pooling-purchasing approach in health-financing analysis. In our view, while the three-functions approach is today’s best fit to analyse the efficiency of health financing, only a people-centred approach can unpack the dynamics of social exclusion/inclusion in social health protection. An additional expected advantage of a people-centred approach is the implication of the schemes’ target groups in the research in accordance with the SEKN’s call for the inclusion of the “tacit knowledge of all involved, especially the planned beneficiaries of the interventions or actions” (Kelly et al., 2007).

Figure 1: The generic SPEC-by-step tool

In constructing the tool, we broke down a hypothetical, generic SHP programme into a series of steps, each step excluding a number of people (Figure 1). The excluded are shown on the left in a red box; the non-excluded to the right in a green box. For the sake of clarity, we limited the series of steps to six levels with five steps connecting them. Arguably, the actual numbers of levels and steps can be more (or less) in particular programmes; furthermore, we assume that a programme would accommodate the required modifications in the event of contextual adaptation. Also, and again arguably, the focus on exclusion only and the linear order of levels and steps are simplifications. Steps themselves can also be a reduction of reality, neglecting the iterative character of, for example, becoming aware of a programme (see Step 1). Furthermore, uncalled-for inclusion (leakage) is not explicitly taken into account by the tool. Finally, we recognise that feedback loops might be needed, e.g. when a programme requires periodic registration or card renewal.
Step 1: From population targeted to subpopulation reached

We start the cascade with Level 1: the population targeted by SHP programme, or those, in theory, eligible for entering the programme, i.e. the declared target population of a given SHP programme in a given context and in a given time. This means that we do not analyse whether the eligibility criteria for setting the target was exclusionary or inclusionary: this would be beyond the scope of the tool. It also means that the target population can change if the programme policy changes, e.g. when the Indian government adds domestic workers to the population eligible for RSBY. A target population can be as big as the general population – as is the case in the NHIS in Ghana – or a subpopulation – such as people aged over 60 in the Sésame in Senegal plan. Ideally, all targeted people become aware of the programme and are given the possibility of entering the programme. We refer to this as being reached by the programme. In real life, it is rarely the case that the entire target population is reached. Thus, Level 1 is followed by Level 2 – subpopulation reached by SHP programme, and in the cascade between Level 1 and Level 2, people are lost in Step 1. These are referred to as the unreached.

Analysis should include asking the ‘who’, ‘how’ and ‘why’ questions: what are the profiles of the unreached, how are they different from those reached by the programme, and what might be the reasons for their being unaware of and/or not being addressed by the programme? Answers for these questions on profile and process should be sought in all four dimensions of social exclusion: social, political, economic and cultural (symbolised by the SPECtacle). The existing literature on SHP by and large fails to answer these questions, typically stopping at the discovery of “lack of information”.

In contrast, the SPEC-by-step tool looks for underlying causes and mechanisms: it generates hypotheses on causal patterns of exclusion. After applying the SPEC-by-step tool to the target population of the SHP programme, and having generated such hypotheses, we can fine-tune these hypotheses by applying the tool to subpopulations that are known to be excluded in a particular context – examples cited by Health Inc are Dalits and Adivasis in India, migrants and minorities in Ghana, migrants and Fula (Peul) people in Senegal and women everywhere.

Step 2: From subpopulation reached to those registered

We now go down to Level 3, the (sub)subpopulation of those registered for SHP programme. Many SHP initiatives entail a registration process. However, of those eligible for and reached by a programme, not all register (or enrol, depending on the particular terminology). We thus have an additional group – the not registered – lost in what becomes Step 2.

As was the case in Step 1, the ‘who’, ‘how’ and ‘why’ questions are repeated in Step 2, with answers sought in all four dimensions of the SPECtacle. This entails examining the profiles of those that did not complete the registration process (and compare these profiles against the profiles of those who did) and scrutinising how and why the registration process was not completed.

Here again, classic SHP analysis faces a conundrum: lack of ‘affordability’ is usually put forward as an explanation, whereas those most in need are less likely to join even if registration fees are close to zero. The SPEC-by-step tool, based on the hypothesis of social exclusion as an underlying mechanism, is expected to provide answers here.
Step 3: From registered to cardholders

We again descend the series of steps and reach Level 4, the (sub)(sub)subpopulation of cardholders. In many SHP initiatives, those registered are supposed to receive a card that enables them to access stipulated benefits. However, not everyone who registers receives their card on time; some don’t receive their card at all. Besides, programmes might require periodic renewal of the card, which may confront potential beneficiaries with the same hurdles again. We thus have an additional group – those with no card – lost in what becomes Step 3. We refer to a cardholder only when a person’s/household’s card is valid.

Again, the ‘who’, ‘how’ and ‘why’ questions will be asked with answers sought for in all four dimensions of the SPECtacle, examining the profiles of those that do not hold a valid card (and comparing these profiles against the profiles of those who do hold a card) and scrutinising whether social exclusion can explain how and why some registered do not hold a valid card while others do.

Step 4: From cardholders to people claiming health services

We go down one more step and reach Level 5, the (sub)(sub)(sub)subpopulation of those people who actually claimed service. In many cases, not all cardholders decide to visit a service provider and request services, despite having a health problem that merits treatment by a service provider. Potential reasons for not doing so are manyfold. In Step 4 we thus lose an additional group: those who make no claim for the services they need.

As before, the ‘who’, ‘how’ and ‘why’ questions will be asked with answers sought in all four dimensions of the SPECtacle by examining the profiles of those that do not claim health services provided through the SHP programme (and compare these profiles against the profiles of those who do) and scrutinising whether social exclusion can explain how and why some cardholders do not claim services while others do.

Step 5: From claiming to adequately benefiting from health services

We descend once more and reach the final Level 6, the (sub)(sub)(sub)(sub)sub-population of those people who actually used and benefited from the health services as considered reasonable and due under the SHP initiative. In Step 5 we lose a last group that we call no benefit: those people who claimed the service but did not receive the benefits as stipulated by the programme.

Again, the ‘who’, ‘how’ and ‘why’ questions will be asked with answers sought in all four dimensions of the SPECtacle, examining the profiles of those who were unable to benefit from the services as stipulated under the programme (and comparing these profiles with the profiles of those who were able) and scrutinising if social exclusion can explain the how’s and why’s.

At this final level, the SPEC-by-step tool – focusing on unequal power relationships leading to social exclusion – can unpick what classic SPH analysis classifies as ‘implementation errors’: service users who still pay for what should be provided free of charge according to the programme, who receive only part of the benefit stipulated by the programme, or receive services that are inconsistent with their needs.

About the tool

The SPEC-by-step tool is essentially an example of “making use of existing methods” (WHA, 2009), as it combines the recently developed SEKN four-dimensional framework with a logic inspired by a model put forward nearly half a century earlier. While the former is well known, the latter deserves some clarification. In 1967, Maurice Piot published his “simulation model of case finding and treatment in tuberculosis control programmes” (Piot 1967). The Piot model starts from a description of the steps people go (or don’t go) through between becoming ill with active tuberculosis (TB) and being cured by the TB programme under consideration (Dujardin et al. 1997). Operational
efficiency of the programme is expressed as the probability that a person does proceed from one step to the next. The original model was presented as a predictive one based on computed scores, though the author also expected it to stimulate critical thinking on existing programmes and invited others to do so. He did not invite in vain: for decades now, the Piot model has been adopted and adapted in a range of disease control programmes.

In TB control, Dujardin et al. (1997) applied the model to identify problems arising from the integration of TB control into general health services, as was the case when Directly Observed Therapy (DOT) was launched. Over time, several modifications to the programme that reduced loss of patients along the course – decentralisation of diagnostic procedures for instance – are largely due to the identification and quantification of bottlenecks in application of the Piot model.

Mumba et al. (2003) produced a close translation of the Piot model for malaria control, giving due credit to the original. Unger et al. (2006) applied it to highlight the need for strengthening health services to boost the performance of malaria-control programmes.

Robays et al. (2004) drew upon the Piot model to identify under which conditions sleeping sickness control would benefit from the introduction of new technologies. Jenniskens et al. (1995) used a Piot-like model to demonstrate the advantages of decentralising screening of pregnant women for syphilis control, but failed to acknowledge the original. A subsequent WHO publication (2005) gave rise to a nickname: the ‘supposed to’ model.

The Piot model had its most impressive track record in the control of sexually transmitted diseases (STDs), starting with its proposed application for improved case detection and management of STDs at the VIIIth International Conference on AIDS in Africa (Buvé et al. 1993). It gave rise to the ‘operational model of the role of health services in STD case management’ of Dallabetta et al. (1996), was renamed ‘Piot-Fransen model of STD management’ by Hayes et al. (1997), again recognised as Piot model by Amaral (1998) and reintroduced as such by Laga at the 1998 12th International AIDS Conference (Mayaud and McCormick, 2001), yet survived as ‘Piot-Fransen model’ for over a decade (Hudson, 2001; Thieren, 2005). Most importantly, the model has been fine-tuned over time and – as happened with its cousin in TB control – its application improved both programme uptake and cure rate (Buvé et al., 2001).

Our approach is thus neither unique nor innovative per se. As the previous examples demonstrate, our preference for a stepwise follow-up of a target population is preceded by a long history of a similar approach in disease control that evolved from an explicitly predictive model to a successful assessment tool. Our construct is also preceded by the proposal – in the field of social health protection – of a step-by-step ‘head count framework’ for the analysis of targeting interventions (Meessen and Criel, 2008). While arguably the first, the Piot model was not unique, several authors (Thieren, 2005; van Olmen et al., 2012) recognise the analogy between Tanahashi’s conceptualisation of health service coverage (1978) and the Piot model.

What differentiates the SPEC-by-step tool from the original Piot model is the absence of a strictly predictive character exclusively based on quantitative data: our tool allows for and explicitly requires input of qualitative and quantitative data. What differentiates the SPEC-by-step tool from the recently developed ‘step-by-step health inequality assessment’ (WHO 2013) is our prioritisation of a people-centred perspective. The people-centred orientation is further reinforced – and this might be called innovative – by our drafting of the SPEC lens (or SPECTacle) onto the stepwise deconstruction of an SHP programme.
The SPEC-by-step tool, as described above, is a generic tool and not to be applied without previous adaptation to the characteristics of both the SHP initiative wherein social exclusion will be assessed and the context wherein that initiative is executed. In Health Inc, we adapted the SPEC-by-step not only according to the specific characteristics of three different SHP programmes (RSBY in India, plan Sésame in Senegal, NHIS in Ghana), but also according to the differing implementation modalities of RSBY in Karnataka and Maharashtra.

In all four Health Inc study states/countries, the research teams experienced the SPEC-by-step tool as useful for the identification of key steps within the programme coverage cascade and for the estimation of expected rates of exclusion in each step. The adapted tool allowed the taking of informed decisions on what data to collect and by which data collection tools. With regard to data analysis, two experienced constraints were then needed to further split up the steps and the lack of absolute boundaries between the steps: some can overlap in content or in time. In contrast, three substantive advantages of the tool were identified: (1) the tool enables the researcher to maintain a focus on the interface between SHP programme and social exclusion, preserving him/her from getting lost in generalisations; (2) the tool enables the researcher to maintain a systemic and people-centred perspective, allowing meaningful framing of the findings; (3) the tool allows the researcher to identify dimensions that remain important throughout all steps, to also identify dimensions that dominate in the initial steps and then start filtering out, and to differentiate between predominant group exclusion in the initial steps and predominant individual exclusion in the final steps. From a researcher’s perspective, these advantages added relevance to the ultimate policy recommendations.

In Karnataka – where the RSBY programme was still in expansion during data collection – the IPH Health Inc research team saw itself confronted with the interest of stakeholders in a limited set of steps. Implementers (insurance companies and so-called third-party administrators) were mainly interested in the results of the first steps up to the cardholders. Policymakers initially expressed interest only in “how many got it and how many used it”. Ultimately, the SPEC-by-step tool allowed for visualisation of significant exclusion at all steps. When confronted with such graphical representation, policymakers and implementers stopped blaming the potential beneficiaries that didn’t take up the scheme and became sensitive to possible flaws in the scheme’s design and implementation.

In Maharashtra – where the RSBY programme was never implemented in the entire territory and gradually withdrawn since 2010 when the state-specific SPH programme Rajiv Gandhi Jeevandayee Arogya Yojana (RGJAY) was rolled out – the TISS Health Inc research team nevertheless experienced the mechanisms of social exclusion identified in RSBY as relevant points of attention in the further development and monitoring of RGJAY.

In Senegal – where the plan Sésame was designed to provide free health care to all aged over 60 with no other prerequisite than the presentation of an identity card – the CREPOS Health Inc research team was able to clarify to the policymakers how major portions of the elderly are still excluded from the programme’s reach, from claiming services, and ultimately from benefits.

In Ghana, the ISSER Health Inc research team fine-tuned the SPEC-by-step tool further by breaking down the social, political and economic dimension of the SPECtacle into specific sub-dimensions, such as discrimination and deprivation, social markers/drivers of social exclusion, social capital, social participation (S), political resources, political and civic participation (P), economic resources, and economic participation (E).

Unpacking the black box

In all four study states/countries, answers on the ‘who’, ‘how’ and ‘why’ questions in all four SPEC dimensions were sought through a genuine mixed-method approach, starting with a survey-based quantitative strand and followed by a qualitative strand consisting of in-depth interviews and focus group discussions in an explanatory sequential design (Creswell et al., 2003).
For answering the ‘who (is excluded)’ and ‘what (they are excluded from)’ questions, household surveys were the most important tool and data source. The surveys were based on a comprehensive list of commonly agreed variables. Sampling was meticulously adapted to the local study context, as documented further on in the respective case-study chapters.

For answering the ‘how (are people excluded)’ and ‘why (are they excluded)’, the in-depth interviews and focus group discussions (FGDs) became more important as data collection and continuous analysis progressed. To get the most from the FGDs – and to avoid common misapplication of FGDs due to adaption of market research conventions unfit for social science – three capacity-building Health Inc Newsletters (17 September 2012; 1 October 2012; 31 October 2012) were dedicated to the subject. We modelled our FGDs to “allow participants to generate their own questions, frames and concepts and to pursue their own priorities on their own terms, in their own vocabulary” (Kitzinger and Barbour, 1999) and to “capitalize on the interaction within a group to elicit rich experiential data” (Asbury, 1995). We indeed expected a richness of data and were aware of the consequences. As Barbour (2007) puts it, “analysis then becomes more than simply plucking themes out of the data and involves a process of interrogating the data, contextualizing comments, developing tentative explanations and subjecting these to further interrogation and refinement”.

To deal meaningfully with the ever-increasing volume and complexity of our data, we deliberately adopted a theory-oriented approach inspired by the realist concept of generative mechanisms (Chen and Rossi, 1989; Elster, 1989; Demetriou, 2009). Indeed, a theory-oriented approach is well suited in complex social systems: it takes into account the interaction between agency and structure and can provide plausible explanations as to how interventions have produced their results, in which conditions and for whom (Marchal et al., 2010). Having identified the need for the identification of generative mechanisms, a product of iterative abstraction linking explanans and explanandum (Astbury and Leeuw, 2010; Sayer, 2002), we dedicated an exploratory partner meeting (see Soors, 2013) and two Health Inc Newsletters (30 April 2013; 31 October 2013) to advance this analytical strategy. Considering social exclusion as the central process to understand, we thus moved beyond description to the identification of the process’ mechanisms. The results of this inquiry will be presented in Chapter 11.

**Endnotes**

1 Not to be confused with the 1992 Rio Declaration on Environment and Development, nor with the 2012 Rio+ Declaration on Sustainable Development.

2 This was to some extent remedied when Solar and Irwin arrived at the ‘Final form of the CSDH conceptual framework’ (Solar and Irwin, 2010). The earlier framework had “social determinants of health and health inequities” throughout (CSDH, 2008, p. 43), whereas the newer one grouped “social determinants of health inequities” under ‘structural determinants’ leading to ‘intermediary determinants’ under which the “social determinants of health” than resorted (Solar and Irwin 2010, p. 6).

3 PROGRESS stands for Place of residence, Race or ethnicity, Occupation, Gender, Religion, Education, Socioeconomic status and Social capital or resources (WHO, 2013). The acronym stems from the pre-CSDH era (see Gwatkin, 2007) and the resulting concept of ‘equity stratifiers’ is arguably restrictive when compared to the CSDH framework.

4 “(A)lthough politicians, policy makers and other stakeholders may wish for a single composite index of ‘social exclusion’ derived from multiple data sources, this approach is highly problematic: theoretical concerns include the concept’s multi-dimensionality and dynamism, while from a pragmatic perspective, there are potential pitfalls in developing rules for aggregation and weighting of data and problems with variations in the quality and availability of appropriate data” (Mathieson et al., 2008, p. 39).

5 See http://www.socialsecurityextension.org/gimi/gess/ShowTheme.do?tid=1321
We have used enrolled as a synonym for registered, and not as a synonym for cardholders (as in often the case in SHP studies) to avoid confusion. Unfortunately, not all enrolled people are cardholders.

Note that ‘claiming’ here refers to claiming care, as in claiming a right (person-and people-centred), not to claiming reimbursement from an insurance scheme (finance-centred).

Because the consecutive steps were now formulated in terms of “what is supposed to happen, but does not” (WHO, 2005).

Tanahashi (1978) put forward a stepwise assessment of health service coverage from target population to ultimate goal, deconstructing service provision in the consecutive steps of availability coverage, accessibility coverage, acceptability coverage, contact coverage and effectiveness coverage. Tanahashi's categorisation has been influential in health services research and enjoys renewed attention in the actual debate on universal coverage (Evans et al., 2013).

This people-centred perspective deliberately takes the analysis to a next level. While scheme-centred evaluations might for example detect low enrolment in rural areas due to registration in the day time, a people-centred enquiry will go on asking why scheme designers and implementers did not take into account that the poor have no other choice than to be busy in the field.

References


